From: LIVERMAN Alex
To: Jonathan Freedman/R10/USEPA/US@EPA; Chip Humphrey/R10/USEPA/US@EPA
Subject: T-5 proposed 401 WQC conditions
Date: 06/04/2010 11:05 AM
Importance: High

Hiya fellas!

Thanks again for your participation in the coordination meetings for the dredging activities proposed in Portland Harbor! I think the first meeting went really well…

Per our discussion, below are the draft conditions I am proposing for the 401 for T-5 (pardon the font and format errors). They line up pretty well with the NMFS BO conditions, though I dispensed with trying to confirm the deposition and just asked for baseline grabs immediately after dredging and again after the freshet. We all assume there will be relatively clean sediment depositing such that the rate is not important. If, however, the sediment depositing is not clean or the leave surface is hotter than expected for PCBs and DDT, a cap is warranted.

Let me know if you find these conditions acceptable or have any others to add or other suggestions. I am in training June 7-11, but will check in on email. I intend to have this finalized for signature on Jun 14 (as I am out of town Jun 15-18). THANKS!

--Alex

Sediment Characterization has been conducted in accordance with the *Sediment Evaluation Framework for the Pacific Northwest, May 2009* [USACE, NMFS, US Fish and Wildlife Service (USFWS), US Environmental Protection Agency (EPA), DEQ, Washington Department of Natural Resources (WDNR), Washington Department of Ecology (Ecology), and Idaho Department of Environmental Quality (IDEQ)].

(a) Sediments at both berths were determined by the Project Review Group (PRG) to be unsuitable for unconfined, in-water placement, due to exceedances of screening levels and bioaccumulative risk for PCBs, DDT, Zinc and Cadmium.

(b) The PRG determined that newly exposed surface material in berth 501 and the western portion of berth 503 is likely to contain higher levels of PCBs and DDT than the current levels and therefore, will pose bioaccumulative risk. As such, leave surface management options are required.

5) **Dredged Material and Leave Surface Management:** Due to the contaminants present and the potential for their mobilization into other areas prior to completion of the decision on remedies for remediation of the Portland Harbor superfund site, the Port must implement the following requirements:

(a) The Port has agreed to dredge approximately 1 foot deeper than originally proposed at berth 501 in order to address removal of high levels of PCBs and DDT

revealed during sampling and analysis. Material must be removed to a depth of approximately -47 feet CRD at berth 501.

(b) Dredging of holes or sumps below maximum depth and subsequent redistribution of sediment by dredging, dragging, or other means is prohibited.

(c) Within three days of dredging completion at each berth, grab samples (density and method per PRG recommendations) must be collected from the newly exposed surfaces and analyzed for PCBs and DDT to establish a baseline for comparison in determining success of the monitored natural recovery option of leave surface management. Results must be submitted to DEQ and EPA.

(d) Relatively uncontaminated sediment is anticipated to be deposited at rates of approximately 0.9 feet/year in berth 501 and 0.45 feet/year in berth 503. Therefore, following the first freshet, grab sample collection and analysis must be repeated for the newly deposited surface of the berths and compared against the baseline established above. Results must be submitted to DEQ and EPA.

(e) In the event DEQ and EPA determine that surface levels of PCBs and DDT pose unacceptable risk, the Port must place clean sand to a depth of at least six inches over the areas of concern, in order to prevent exposure and potential mobilization.

6) **Dredging Operations:** The Port and its contractors must conduct dredging operations employing Best Management Practices (BMPs) which minimize disturbance or siltation of adjacent habitat or waters. These BMPs must include the following:

(a) Floating containment and absorbance booms must be maintained on site throughout implementation of the project and deployed in the event that any sheen or floating debris is detected during project operations.

(b) Employ techniques to minimize sediment disturbance and distribution through the water column.

i. Sequence or phase work activities to minimize the extent and duration of in-water disturbances;

ii. Employ an experienced equipment operator;

iii. Implement bucket control techniques, such as:

1. Do not overfill the bucket.

2. Close the bucket as slowly as possible on the bottom.

3. Pause before hoisting the bucket off of the bottom to allow any overage to settle near the bottom.

4. Hoist load very slowly.

5. Move the bucket quickly to the barge to avoid decant water from being discharged to surface waters.

6. "Slam" open the bucket after material is dumped on a barge to dislodge any additional material that is potentially clinging to the bucket.

7. Ensure that all material has dumped into the barge from the bucket before returning for another bite.

8. Do not dump partial or full buckets of material back into the wetted stream.

(c) Load the sealed barge such that safe movement without spillage of any dredged material or decant water is possible during transport to the disposal facility.

(d) Use an experienced operator and all practical control methods for offloading slurry and elutriate at the disposal facility to avoid any discharge to the Columbia River or other waters of the state (including wetlands).

(e) If the dredging operation causes a water quality problem which results in distressed or dying fish, the operator shall immediately: cease operations; take appropriate corrective measures to prevent further environmental damage; collect fish specimens and water samples; and notify DEQ, ODFW and NMFS.

7) **Dredged Material Disposal:** As sediments proposed for dredging have been determined to be unsuitable for unconfined, in-water disposal, all material and water removed from berths 501 and 503 must be disposed of at the Port's West Hayden Island facility in compliance with DEQ's May 21, 2009 letter regarding interim terms and conditions for compliance with DEQ's Solid Waste rules.

(a) Discharge to waters resulting from dewatering during dredging or release of return water from an upland facility is prohibited except as provided below.

i. All water removed with sediment must be contained and disposed of at an appropriately sized and sealed upland facility by evaporation or absorption by inert material (such as shredded paper).

ii. A Modified Elutriate Test (MET) may be performed for the known contaminants of concern (CoCs) with results compared against DEQ freshwater chronic water quality criteria. If CoC concentrations are below the criteria, criteria are not applicable, or DEQ Cleanup offers a determination of acceptability; dewatering and return water discharge are not limited.

1. The MET must be performed before dredging.

2. DEQ must approve the list of CoCs and analytical method prior to the applicant performing the MET.

3. DEQ must review the results and provide approval of discharge from dewatering and return water in writing prior to dredging.

8) **Turbidity:** All practical Best Management Practices (BMPs) must be implemented during dredging and disposal to minimize and contain turbidity during in-water work. Any activity that causes turbidity to exceed 10% above natural stream turbidities is prohibited except as specifically provided below.

(a) **Monitoring:** Turbidity monitoring shall be conducted and recorded as described below. Monitoring shall occur each day during daylight hours when dredging is being conducted. A properly and regularly calibrated turbidimeter is required taking measurements at approximately mid-depth below the surface of the water and above the channel bottom at the compliance and background distances.

i. Representative Background Point: a sample or observation must be taken every two hours at a relatively undisturbed area at least 100 feet upcurrent from in-water disturbance to establish background turbidity levels for each monitoring cycle. Background turbidity, location, date, time and tidal stage must be recorded prior to monitoring downcurrent.

ii. Compliance Point: Monitoring shall occur every two hours approximately 300 feet downcurrent from the disturbance and be compared against the background measurement or observation. The turbidity, location, date, time and tidal stage must be recorded for each sample.

b) **Compliance**: Results from the compliance points should be compared to the background levels taken during that monitoring interval. Limited duration exceedances are allowed as follows:

MONITORING WITH A TURBIDIMETER

ALLOWABLE EXCEEDANCE TURBIDITY LEVEL	ACTION REQUIRED AT 1ST MONITORING INTERVAL	ACTION REQUIRED AT 2ND MONITORING INTERVAL
0 to 5 NTU above background	Continue to monitor every 2 hours	Continue to monitor every 2 hours
5 to 29 NTU above background	Modify BMPs & continue to monitor every 2 hours	Stop work after 8 hours at 5-29 NTU above background
30 to 49 NTU above background	Modify BMPs & continue to monitor every 2 hours	Stop work after 2 hours at 30-49 NTU above background
50 NTU or more above background	Stop work	Stop work

If an exceedance over the background level occurs, the applicant must modify the activity and continue to monitor

every two hours. **If an exceedance over the background level continues after the second monitoring interval, the activity must stop until the turbidity levels return to background.** If, however, turbidity levels return to background at or after second monitoring level due to implementation of BMPs or natural attenuation, work may continue with appropriate monitoring as above.

If an exceedance occurs at: 50 NTU or more over background; 30 NTU over background for 2 hours; or 5-29 NTU over background for 8 hours, the activity must stop immediately for the remainder of that 24-hour period.

(c) **Reporting:** Copies of daily logs for turbidity monitoring shall be available to DEQ, USACE, NMFS and ODFW upon request. The log must include: background NTUs, compliance point NTUs, comparison of the points in NTUs, and location, date, time, and tidal stage for each reading. Additionally, a narrative must be prepared discussing all exceedances with subsequent monitoring, actions taken, and the effectiveness of the actions.

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Got questions about the 401 WQC process? Check out DEQ's new 401 Certification website at: http://www.deq.state.or.us/wq/sec401cert/sec401cert.htm